EXECUTIVE SUMMARY

The U.S. Department of Interior (USDI), Bureau of Land Management (BLM), prepared a Draft Supplemental Environmental Impact Statement (SEIS) to evaluate and disclose to the public the direct, indirect, and cumulative environmental impacts associated with a proposed long-term plan for continued exploration and development of natural gas resources in the Pinedale Anticline Project Area (PAPA) in Sublette County, Wyoming (see Map 1.1-1). The BLM solicited and obtained public comment on the Draft SEIS from December 2006 until April 2007. Based upon the public comments, the BLM analyzed two additional Alternatives in a Revised Draft SEIS. The BLM solicited and obtained public comment on the Revised Draft SEIS from December 2007 through February 2008. Responses to comments received on the Draft SEIS and on the Revised Draft SEIS are included as part of this Final SEIS.

Collectively referred to as the Proponents, Ultra Resources, Inc., Shell Exploration & Production Company, Questar Market Resources including Wexpro Company, BP America Production Company, Stone Energy Corporation, Newfield Exploration Company, Yates Petroleum Corporation, and Anschutz Pinedale Corporation have notified the BLM Pinedale Field Office (PFO) that they propose a new long-term development plan that includes year-round development (construction, drilling, completion, and production) of 4,399 additional natural gas wells within their leases in the PAPA. In addition to year-round development proposals by the Proponents, the BLM has identified the need for additional pipeline corridors to transport hydrocarbon products from the PAPA to gas processing plants in southwest Wyoming. Jonah Gas Gathering Company and Rendezvous Gas Services propose gas sales pipelines that would be sited within the new corridors, and Questar Gas Management is proposing an expansion of the Granger Gas Processing Plant in Sweetwater County.

The BLM prepared this Final SEIS because the Proponents' proposed long-term development plan is substantially different from the approach that was analyzed in the *Draft Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project – Sublette County, Wyoming* and approved in the PAPA ROD, published in 2000. Limits on levels of development and analysis thresholds were set forth in the PAPA ROD. Under the current proposal, these limits may be exceeded. Analysis thresholds associated with air quality have already been exceeded. In proposing year-round development (construction, drilling, completion, and production), the Proponents are requesting exception from BLM's seasonal restrictions (Condition of Approval or lease stipulation) within certain areas of the PAPA that coincide with big game (mule deer, pronghorn, and moose) crucial winter habitats and greater sage-grouse seasonal habitats. The BLM has determined that the Proponents' proposal could cause significant impacts to the human and natural environments.

LIMITS BY THE PAPA ROD

Project components approved in Section 2 of the PAPA ROD include:

- 900 initial well pad locations on all lands and minerals within the PAPA;
- 700 producing wells and/or well pads on all lands and minerals within the PAPA;
- 700 production facilities at individual well locations;
- central production facilities;
- 4 compressor facility sites;

- water wells for drilling/completion;
- 1 BP Amoco Field Office;
- ~121.5 miles of sales pipeline corridor for multiple pipelines;
- ~276.0 miles of access road (including collector, local and resource roads); and
- ~280.0 miles of gathering pipeline system.

The PAPA ROD did not limit wells but limited well pads within defined Management Areas (MAs) that were developed to conserve sensitive resources. The PAPA ROD specifies that if any of the authorized limits to development are reached, additional environmental analysis would be required.

EXISTING DEVELOPMENT

Since 2000, most natural gas development in the PAPA has been along the Anticline Crest, which is approximately 2 to 3 miles wide, 25 to 30 miles long, and centered along the length of the PAPA. The Proponents are proposing long-term development within the Anticline Crest as well as continued exploration off the Anticline Crest. As of November 2006, there were approximately 642 producing wells on 340 well pads in the PAPA. Of these, 613 producing wells on 285 well pads were drilled after issuance of the PAPA ROD. There were 26 drilling rigs operating in the PAPA at the end of 2006.

SCOPING

BLM held meetings with participation from various agencies, the Proponents, and the public to encourage early and improved public participation and agency cooperation. The BLM's Notice of Intent (NOI) to prepare a Supplemental EIS inviting the public to comment on the Proponents' proposal for long-term development of the PAPA appeared in the Federal Register on October 21, 2005. BLM mailed a scoping notice to the media, governmental agencies, environmental organizations, industry representatives, individuals, landowners, and livestock grazing permittees. The scoping notice explained the general nature of the project and requested comments. The public scoping comment period ended November 20, 2005. Scoping meetings were held in Jackson and Marbleton on November 7, 2005, and in Pinedale on November 8, 2005. The locations of the proposed transportation corridor/pipeline alignments were not determined at the time of the initial scoping; therefore, an additional scoping notice was issued. The second notice, mailed on April 14, 2006, was sent to the same recipients as the October 2005 scoping notice, as well as individuals and organizations on mailing lists provided by the BLM Rock Springs and Kemmerer field offices. The public comment period for the second scoping notice ended on May 17, 2006. Numerous issues were identified in the scoping process. Comments received during scoping were incorporated into the analysis in the Draft SEIS published in December 2006.

Comment Period on the Draft SEIS

The Draft SEIS was available for public comment in December 2006. BLM hosted an open house on the Draft SEIS on February 13, 2007 in Pinedale. Over 63,000 comments were received on the Draft SEIS. The BLM received substantive comments from business and industry representatives; environmental groups; federal, state, and local agencies; and

individuals about the Alternatives and many respondents suggested that additional Alternatives be considered. Based upon these suggestions, the BLM formulated two additional Alternatives and made changes to the Draft SEIS, resulting in the Revised Draft SEIS. BLM's response to substantive comments received on the Draft SEIS is included in this Final SEIS. The major changes to the Draft SEIS resulting in the Revised Draft SEIS were:

- The affected environment has been updated with current baseline data and includes development that occurred in 2006;
- Two additional Alternatives (Alternative D and Alternative E) are analyzed;
- Additional Proponent-offered mitigation is included in Alternative D; and
- Additional discussion of impacts to socioeconomic, air quality, and wildlife resources, based on a range of drilling rigs operating in the PAPA at any one time, is included.

Comment Period on the Revised Draft SEIS

The Revised Draft SEIS was available for public comment in December 2007. BLM hosted two open houses on the Revised Draft SEIS on January 17, 2008 and February 2, 2008. Over 68,000 comments were received on the Revised Draft SEIS. The BLM received substantive comments from business and industry representatives; environmental groups; federal, state, and local agencies; and individuals. Based upon comment received on the Revised Draft SEIS, BLM has prepared this Final SEIS. BLM's response to substantive comments received on the Revised Draft SEIS is included in this Final SEIS.

ALTERNATIVES

Alternative A - No Action Alternative. The No Action Alternative is based on elements authorized by the PAPA ROD in 2000. Development in the PAPA beyond the limits specified in the PAPA ROD would require additional environmental review; however, the limits have not been reached for wellfield components. The PAPA ROD did not specify the type or extent of the additional environmental review that would be required.

The No Action Alternative is required by the National Environmental Policy Act (NEPA) as a baseline against which other action Alternatives can be analyzed. For this project, the No Action Alternative is a continuation of current BLM management practices. Wellfield development could continue on state and private leases and would occur on federal leases as authorized by prior NEPA decisions.

Alternative B - Proposed Action Alternative. The Proposed Action includes year-round development (construction, drilling, completions, and production) of up to 4,399 additional wells and up to 12,885 acres of new surface disturbance, including well pads, roads, pipelines, and other ancillary facilities within the PAPA. Year-round development would be allowed within the Alternative B Core Area centered on the Anticline Crest and would be mostly concentrated within three Concentrated Development Areas at any one time. The Proponents would install a liquids gathering system in the central and southern portions of the PAPA complementing the existing liquids gathering system in the northern portion of the PAPA. Tier 2 equivalent emission controls would be installed on drilling rig engines in 29 out of 48 drilling rigs at peak drilling in 2009. The Proponents have offered 3:1 off-site mitigation for wildlife, if necessary.

Alternative C. Alternative C is similar to Alternative B in that it includes the same project components including up to 4,399 additional wells on up to 12,885 acres of surface disturbance; however, it is spatially different. That is, rather than only specifying certain areas of development where year-round development could occur, Alternative C specifies areas where year-round development would not occur. It includes a core area (Alternative C Core Area) that is different from the Alternative B Core Area. The overall objective of Alternative C is to control spatial disturbance over time, maximizing development in some areas while minimizing development in other areas, especially in portions of big game crucial winter ranges. Alternative C includes five development areas (DAs). Year-round development would be allowed within four of the five DAs (1 through 4). Alternative C includes additional air mitigation to further reduce impacts to nearby sensitive areas.

Alternative D. Alternative D, the BLM Preferred Alternative, is the result of comments received on the Draft SEIS. Alternative D is similar to Alternatives B and C in that it includes the same project components including up to 4,399 additional wells on up to 12,885 acres of disturbance. Major differences in this Alternative are an expanded core area (Alternative D Core Area), divided into five DAs, and a Potential Development Area (PDA) that surrounds the majority of the Alternative D Core Area. This Alternative presents a spatially phased development approach, while adding additional measures, including federal suspended and term NSO (no surface occupancy) leases (where no additional development would occur for at least the first 5 years) in the Flanks, outside of the Alternative D Core Area and PDA. Alternative D includes additional air mitigation to further reduce impacts to nearby sensitive areas. An adaptive management approach and a compensatory mitigation fund are elements of Alternative D.

Alternative E. Alternative E, also the result of comments received on the Draft SEIS, analyzes seasonal restrictions remaining in effect. This Alternative reflects a development approach similar to that considered in the PAPA ROD, while analyzing the impacts of full field development of the natural gas resource. Under this Alternative, a core area (the Alternative E Core Area) is defined which is the same geographic area as the Alternative D Core Area. A Buffer Area which is the same geographic area as the Alternative D PDA has also been defined. This Alternative sets limits on the number of active well pads and acres of surface disturbance within the Alternative E Core Area, the Buffer Area, and the Flanks.

ENVIRONMENTAL IMPACTS

Potential impacts resulting from natural gas development in the PAPA to various resources vary by Alternative and are summarized below.

Socioeconomics. Expanded drilling and production activities under all Alternatives evaluated in this Final SEIS will continue to exert pressure on socioeconomic resources in affected communities. Employment associated with the PAPA would increase. The populations of affected communities are expected to increase, which would lead to further increases in the demand for housing and local services, most notably schools, medical services, fire protection, and law enforcement. Increasing revenues from the PAPA would help local governments meet these demands. Communities are likely to continue to experience growth-related problems. Employment under all Alternatives analyzed in this Final SEIS is strongest during the development phase, while production has a lower impact than development on employment and earnings trends.

Transportation. Each Alternative would require construction of additional roads to support increased wellfield traffic. Traffic levels would increase during winter with year-round

development. Increased traffic would increase road maintenance costs and could lead to increased vehicular crash rates. Installation of the liquids gathering system in the central and southern portions of the PAPA in addition to continuation of the liquids gathering system in Questar's leases would eliminate approximately 90 percent of truck traffic (3,820 vehicles per day in the production-only phase) associated with removal of condensate and produced water. The use of computer-assisted operations in Alternatives B, C and D, would further reduce light vehicle traffic.

Land Use and Residential Areas. Wellfield development under any of the Alternatives would have minimal impact to lands zoned as Residential by Sublette County. Under all Alternatives, over two-thirds of the initial surface disturbance within the 0.25-mile residential buffer and Residential Sensitive Resource Management Zone would be on private lands with privately-owned mineral rights where there is no federal jurisdiction. Differences in the amount of surface disturbance by Alternative are inherent to the Alternative and depend upon length of the development phase, allowance of year-round development, degree of concentrated development, degree of interim reclamation, and inclusion of a liquids gathering system. Under all Alternatives, over 90 percent of the initial disturbance is within the Shrub and Brush Rangeland land use/land cover type. The remainder of the initial disturbance under all Alternatives is mostly in Mixed Rangeland and Cropland and Pasture land use/land cover types.

Recreation. Decreased recreational use of off-highway vehicle areas in the PAPA, by additional surface disturbance, is expected for each Alternative. Decreased hunting opportunities are expected in the PAPA with decreased abundance of big game and upland game birds as the density of wellfield development increases. Impacts to Recreation Resources would include increased traffic and human presence in the PAPA, increased noise, and changes to the visual landscape, making it a less desirable place to recreate. Increase in population overall and specifically to the Town of Pinedale make it more difficult for people to visit the PAPA and surrounding areas because motel rooms are full at different times of the year, possibly causing potential visitors to choose other locations for recreation.

Visual Resources. Most disturbance, by any Alternative, would be within land classified as VRM IV. Substantial portions of land in the VRM Class III would be affected by all Alternatives, primarily within the northern end of the PAPA and along the New Fork River. Some development in VRM Class III lands on the west side of U.S. Highway 191 has already occurred in the southern end of the PAPA and additional development is expected under all Alternatives. Wellfield development could disturb about 2,000 acres in VRM Class III on BLM-administered public lands by all action Alternatives. Construction of new well pads and ancillary facilities would be highly visible during winter if snow cover presents highly contrasting visibility conditions.

Cultural and Historic Resources. Destruction and/or unexpected discoveries of archaeological resources are expected consequences of new surface disturbance in the PAPA by each Alternative. Increased surface disturbance is likely in areas with high potential for major finds (sandy bluffs south of the New Fork River, not in Mesa Breaks). There would be no surface disturbance for well pads within a 0.25-mile buffer of the Lander Trail; however, disturbance associated with linear facilities may decrease the visual integrity within the Lander Trail Sensitive Resource Management Zone.

Air Quality. It is expected that there would be no violations to applicable federal and state air quality standards under any of the Alternatives. Air quality impacts to visibility at regional Class I airsheds (e.g., Bridger Wilderness Area) are anticipated under all Alternatives. Some

Alternatives include mitigation to reduced impacts to regional Class I airsheds. A detailed analysis of air quality effects is provided in the *Air Quality Impact Analysis Technical Support Document*.

Noise. Drilling and completion under each Alternative would increase noise from pre-development levels above 10 dBA at noise-sensitive sites (residences and greater sage-grouse leks) up to 2,800 feet away.

Geology and Geologic Hazards. Additional disturbance by each Alternative would increase erosion and slope instability by disturbance to soils on slopes ≥ 15% with high erosion potential. Continued development under all action Alternatives would lead to eventual depletion of the recoverable natural gas resource.

Paleontological Resources. Additional surface disturbance by each Alternative would increase the possibility of unintentional loss, damage, or destruction of fossils in the Blue Rim Area.

Groundwater. Drilling of water supply wells under each Alternative could lead to temporary drawdown of the Wasatch Formation aquifer. Water use from supply wells for drilling a single well in the PAPA is expected to decrease under all Alternatives as produced water is re-used to a greater degree. Potential impacts to groundwater quality could result from accidental spills of petroleum products or other pollutants and cross-aquifer mixing. Lowering of water levels and cross-contamination of shallow aquifers are preventable by sound well construction practices.

Surface Water. Annual sediment yields could be increased substantially above current conditions in six hydrologic sub-watersheds that coincide with the Anticline Crest and surface water quality could be impacted under all Alternatives. The potential impacts would be greatly reduced by the extensive use of Best Management Practices to prevent erosion and timely interim and final reclamation.

Soil Resources. Each Alternative would disturb sensitive soils with high erosion potential and low revegetation capabilities. Disturbances to soils on slopes ≥ 15% with high erosion potential are expected to increase soil erosion and sedimentation in aquatic habitats substantially above current conditions under all Alternatives.

Vegetation Resources. Removal of existing native vegetation would occur under all of the Alternatives. Surface disturbance in native vegetation dominated by shrubs and trees would be converted to herbaceous vegetation. Unsuccessful revegetation with increased presence of noxious weeds (Canada thistle, perennial pepperweed) is expected on unreclaimed bare ground. However, the Alternative D Reclamation Plan (Appendix 8D) would ensure faster and more results-oriented return of vegetation and functional habitat than the other Alternatives, for both interim and final reclamation.

Grazing Resources. Loss of livestock grazing capacity (AUMs) by removal of existing native vegetation in the PAPA is expected within some grazing allotments. Decreased grazing capacity with increased presence of noxious weeds (Canada thistle, perennial pepperweed) is likely on unreclaimed bare ground.

Wetlands, Riparian Resources and Flood Plains. There would be no loss of wetlands and/or wetland function due to surface disturbance in wetlands for well pads. There would be some loss due to linear facilities under each Alternative. Surface disturbance in the Wetland Sensitive

Resource Management Zone with increased sedimentation in aquatic habitats is possible with removal of forest-dominated riparian and shrub vegetation. Surface disturbance associated with linear facilities within the 100-year flood plain may adversely affect flood plain function which includes river channel migration.

Threatened, Endangered Species and Special Status Species. Because all alternatives would cause water depletions within the Colorado River system, BLM will enter into formal consultation with U.S. Fish and Wildlife Service as required under the Endangered Species Act. However, adverse effects to endangered Colorado River fish species are not anticipated to result from those depletions. Likewise, adverse effects to other ESA-listed species (black-footed ferret, Canada lyns, Ute ladies'-tress) are not expected. Though they are no longer listed under ESA, nesting bald eagles may be affected by surface disturbance and associated human presence by each Alternative. The effects are expected to be substantial within 1 mile of the New Fork River riparian zone with potential effects to forested-dominated riparian habitat which is utilized by wintering bald eagles. Direct effects to special status wildlife species that depend on upland habitats (sagebrush steppe, mixed grass prairie, greasewood and desert shrub), forest-dominated riparian forest habitats, and wetland habitats are expected under each Alternative. Special status fish species may be adversely affected by increased sedimentation in aquatic habitats. Direct effects to extant populations of special status plant species are possible with surface disturbance in the Blue Rim Area under each Alternative.

Wildlife and Aquatic Resources. Implementation of any Alternative is likely to create additional barriers to wildlife movements with increased fragmentation by creation of edges and patches within former contiguous habitats. There would be indirect effects to species that depend on upland habitats (sagebrush steppe, mixed grass prairie, greasewood, and desert shrub), forest-dominated riparian habitats, and wetland habitats. Big game would continue to be adversely affected by wellfield development that causes direct loss of crucial winter range, other seasonally-used habitats, and decreased habitat function near roads and well pads due to human activity. Similarly, decreased habitat function is expected at greater sage-grouse leks by surface disturbance and potential human presence within 2 miles of nesting and brood-rearing habitats. Fragmentation and direct loss of native habitats by surface disturbance is expected to adversely affect migratory birds, particularly in habitats used by sagebrush-obligate species. Decreased raptor nesting habitat effectiveness is likely within 1 mile of New Fork River riparian zone. Decreased reproductive success in spring-spawning native salmonid species is possible from increased sedimentation in aquatic habitats and loss of forest-dominated riparian and shrub vegetation by each Alternative.

MITIGATION MEASURES

Each Alternative contains variations on the amount and level of mitigation that would be required. In addition to mitigation measures typically required by the BLM, mitigation measures are also provided within the Alternative itself. Further, additional mitigation opportunities that could be applied to all Alternatives have been identified and included in Chapter 4. All Alternatives that contemplate year-round development contain offers to provide off-site compensatory mitigation.